February 2006 Volume One, Issue One

#### Welcome!

Welcome to the first issue of *eCoastal Evolutions*! It is our latest form of communication to keep our user group informed on the latest updates to the eCoastal program. In this issue we will discuss available training, database upgrades, and latest additions to the eGIS toolbar.

### eCoastal Training

A new component to eCoastal is the addition of specialized training for coastal engineers on the eGIS tools and applications. This is a 4-day course held at least 3-4 times a year at a coastal district. The training will be a hands-on, instructor led course that focuses on learning the design, implementation and use of the eCoastal tools. This course is designed for anyone who is interested in learning the basics of the eCoastal architecture and the utility of all of the custom tools and applications in the eCoastal toolbar. It is recommended that participants have a basic understanding and working knowledge of ArcGIS.

Most computer training labs limit us to only accommodating 20 students, so upon course announcements, please RSVP as soon as possible.

#### Where is the next training being held?

The following Districts have requested training classes at their site:

If you would like to offer eCoastal training at your District the cost is <u>minimal</u> – just travel, per diem, and salary for the course instructor.

#### What is eCoastal?

The concept of enterprise GIS (eGIS) is to take a complete organizational approach to sharing, using, and managing spatial information. eCoastal is an enterprise Geographic Information System (GIS) developed for coastal engineering business practices. It was developed to concentrate on the specific needs of the coastal engineer, scientist and manager. It is an architecture developed by the U.S. Army Corps of Engineers that utilizes spatial data standards geodatabase (SDS), development, and desktop and web applications. eCoastal was designed as data management solution to baseline information for provide effective planning and prediction of regional and local coastal processes.

#### Did you know?

ESRI offers **free** modules of GIS training with their virtual campus? To access these modules, visit - **http://campus.esri.com/** 

For more information on eCoastal training and access to the online course modules, please visit <a href="http://gis.sam.usace.army.mil/programs/training/Training\_eCoastal.htm">http://gis.sam.usace.army.mil/programs/training/Training\_eCoastal.htm</a>

#### eCoastal Database Updates

Using the Spatial Data Standards ESRI Geodatabase Builder, a "shell" database was created that includes common types of coastal data. Over time, additional feature datasets and classes are added or modified in the database design. In the past, the Spatial Data Branch has always distributed the database in the format of MS Access. In most cases, this \*.mdb file is too large to send via email and can be cumbersome to have multiple versions of the database on hand. To prevent future confusion, the Spatial Data Branch will now distribute the eCoastal template as a **database filter**. For the latest version of the database filter visit the **Downloads** section of the eCoastal website at <a href="http://gis.sam.usace.army.mil/eCoastal">http://gis.sam.usace.army.mil/eCoastal</a>.

#### **Future Releases of the eGIS Toolbox**

#### What version of the eGIS Toolbox do I have?

The eCoastal's eGIS Toolbox was created as a comprehensive set of applications that enable ArcGIS users to access user-friendly interfaces to data retrieval and simplify complex GIS analysis procedures. In the U.S. Army Corps of Engineers (USACE), these tools have emerged as necessary components for effective planning and prediction of regional and local coastal processes.

In the past, the Spatial Data Branch has not formalized versions of the released applications and supplied sufficient documentation. However, all new releases of the toolbars will be version controlled to ensure the eCoastal user base is working on the same version of the application. The next release of the eGIS toolbars are scheduled to be deployed in the second quarter of FY 2006.

Visit the **new eCoastal website** at <a href="http://gis.sam.usace.army.mil/eCoastal">http://gis.sam.usace.army.mil/eCoastal</a>

The new website will provide easy access to eCoastal downloads such as tools, applications, source code, and databases. Also, conference papers, PowerPoint presentations, and system documentation will be available.

#### Does the Data Viewer Tool require an Access database?

The Data Viewer tool allows any user with ArcGIS to locate spatial data that is stored in the geodatabase. It references a group of tables in a database that store business information about each of the layers such as, layer name, description, or keywords. In the past, this tool was fueled by data that was stored in a simple Microsoft Access database. However, due to installation difficulties at particular districts, this tool is currently being redesigned to support enterprise level databases, such as SQL or Oracle.

#### Does a tool exist to import distance/azimuth profile data?

At the end of FY 2005, we added a **Profile Loader** tool to the eGIS Toolbox courtesy of funds supplied by the Jacksonville District. This tool allows users to import and format profile data directly into the database. A spatial data standard (SDS) compliant feature class is automatically generated, with an associated metadata file. The FGDC-compliant metadata record is populated from details listed in the header section of the distance-azimuth text file.

### Raw data

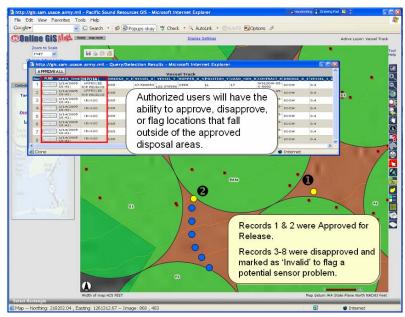
| R-3A   | JUN19738<br>140CT75                                 | 300 506 |   | 1404842<br>11 21 | .944 190 | 0.0023.2   | 9  |        | . 0  |
|--|---|---------|---|------------------|----------|--|--|--------|--|
| -110.0<br>71.0<br>240.0<br>626.0<br>1370.0<br>2150.0 | 23.29<br>2.41<br>-5.33<br>-7.20<br>-19.50<br>-35.60 |         | 20.60<br>2.41<br>-3.40<br>-7.30<br>-23.10<br>-38.20 |                  | -26.60   | -5.0<br>140.0<br>463.0<br>1046.0<br>1820.0<br>2630.0 | 9.96<br>-3.10<br>-3.50<br>-12.80<br>-29.30<br>-43.20 | 2000.0 | 4.52<br>-4.60<br>-6.30<br>-16.00<br>-32.70<br>-45.50 |

### ArcGIS SDS-compliant feature class attribute table

| Z_COORD | Y_COORD       | X_COORD       |
|---------|---------------|---------------|
| 9.4     | 506443.310566 | 1401702.37509 |
| 8.9     | 506428.538449 | 1401699.77036 |
| 8.8     | 506402.933448 | 1401695.25551 |
| 6.8     | 506387.176524 | 1401692.47714 |
| 6.1     | 506379.298062 | 1401691.08796 |
| 3.3     | 506330.057674 | 1401682.40555 |
| 1.4     | 506280.817286 | 1401673.72314 |
| 0       | 506245.364207 | 1401667.4718  |
| -0      | 506231.576899 | 1401665.04073 |
| -0.8    | 506225.668052 | 1401663.99884 |
| 0.0     | 506222.713629 | 1401663.4779  |
| >       |               |               |

#### **Future Capabilities of eCoastal**

Right now we have a number of applications in development that will soon be made accessible to eCoastal users. Although they are being developed for specific Districts or Divisions, they will be available to download for any eCoastal user from our website. Here is a summary of some future applications:



# Monitoring Ocean Dumping with eCoastal and Silent Inspector for the South Atlantic Division

The Silent Inspector (SI) application allows near-real time dredging data to be viewed alongside geospatial information stored in an enterprise geodatabase. Using technology, the US Army Corps of Engineers can monitor the ocean dumping activities of our contractors, run initial quality control queries, and produce reports to inform the Environmental Protection Agency (EPA) of dredge disposal activities. The Spatial Data Branch will develop and online system that allows unauthorized disposal locations to be put through a quality control procedure prior to data being released to the EPA. application will be served through and ArcIMS environment and reference data

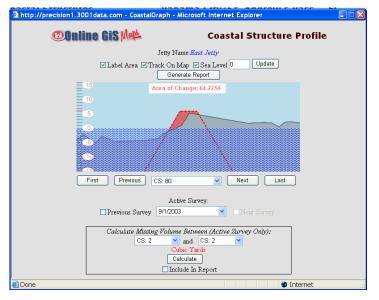
currently stored in the Silent Inspector database.

## Coastal Structures Online Viewer for Stan Boc, CHL and Cheryl Pollock, CHL

The Spatial Data Branch will expand the existing capabilities of the new online jetty condition viewer application. The Jetty Condition viewer allows a user to access jetty structures details through an ArcIMS interface, and compare as-built drawings to current state of the jetty based on survey data. Reports are planned to be automatically generated that detect jetty damage areas.

# Coastal Structures Desktop Viewer for Jeff Melby, CHL

The coastal structures viewer is an extension to ArcGIS desktop that allows the users to view all project related data – spatial and non-spatial



datasets. A view is to be created that allows the user to click on the plotted location of a project area. When the user clicks on the mapping display's hot spot, the map viewer will automatically zoom to the extent of the project area and load applicable project datasets into the Table of Contents. Additional data, such as reports or digital photos, will be available for viewing through an additional toolbar. Also, data collected in the above application will be accessible in this toolbar. This toolbar will contain menus that filter the data related to the coastal structures of the selected project. The user will have the ability to view or add documents or photos at this time.

#### Contact Us!

Do you have any questions or comments on the eCoastal program? If so, please contact **Rose Dopsovic**, eCoastal Project Manager Spatial Data Branch – Mobile District 109 St. Joseph Street, Room 7029 Mobile, AL 36604 Rose.Dopsovic@us.army.mil

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